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AGRICULTURE.

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Delivered at their stated Meeting in May, 1819.

By James M. Garnett, Esq. President of said Society.

(Concluded.)

It may possibly appear somewhat extrajudicial to introduce such matters as the extravagance, folly, and profusion of the prevailing modes in dress, equipage, and living, into an address to an Agricultural Society. But I cannot help viewing them as so directly at war with our best interests, that unless we can arrest their progress in some degree, it will be to little purpose, that we either plough, sow, or reap. Lest, however, I should be supposed to object to them merely from parsimonious considerations, I will take the liberty to remark, that I consider one of the strongest arguments against them, next to their immoral tendency, is, that they are about to banish from the land the small remnant of that ancient hospitality for which our native state used to be so pre-eminently distinguished. So long as the true mode and best style of entertaining our friends and acquaintance was believed to consist in a hearty welcome, and an abundance of the substantial comforts of eating and drinking—principally the produce of our own farms, no difficulty was found in maintaining social intercourse in all its most agreeable forms; but when once the notion grew into fashion, that a display of great style was the chief object of interchanging visits; that the four corners of the world were to be put in requisition for the means; that no food could be eat in comfort, but out of China or plate; no wine drank with pleasure, but from the most costly cut-glass; no company received genteely, unless in new dresses of silk, and "extra superfine broad cloths;" nor any invited, under a Bank notice of three days, at least; (the ancient fashion of impromptu invitations at sight, being entirely exploded as rude and vulgar;) from that period we may date a regular decline of every thing like our good, old, homespun, cordial hospitality. A fashionable lady would now think herself utterly undone to be caught visiting her neighbour in one of your antique double chairs, or on horseback, mounted behind some near relation, with litter Master or Miss, the heir apparent and best hopes of the family, before him. And a fashionable gentlemen would view with unutterable disgust, the old, but the frequent custom of husband and wife going a junketing on the same horse or "beast," as in those days it was more commonly called. 'Tis certainly true, that a thousand dollar Barouche will now take them along much more "stylishly," and with far greater comfort in the transportation, than the former compact mode of allowing but one horse to two or three persons. It is not to any real improvement that I object; nor altogether to a certain degree of cost in equipment; but I insist, that the last should always be well regulated, and duly proportioned to the income; and that whatever we may choose to call improvement, should have some higher claims to such appellation, than its inordinate, and often highly inconvenient expense. If these silly, and indeed criminal excesses, have arisen from a disposition to confound all those distinctions which flow from inequalities of talent, information and property; it ought always to be recollected, that the first can never be destroyed, because they result from natural causes beyond human control; whilst the last can never be en-

turely concealed but from strangers, by any effort which the ingenuity of vanity can contrive. In all competitions of extravagance, the man who happens to have double our wealth, and only an equal stock of vanity—although the chances are in favour of his having more, will for ever be able to keep one hundred per cent. ahead of us. On the contrary, if these fashionable excesses originate from any superior power which they may be supposed to possess of augmenting happiness, all human experience is opposed to any such anticipation. Far be it from me, by any of these remarks to exclude either comforts, social amusements, or even certain luxuries from some share in the expenditure of our surplus revenue, when we have any; but it may be remarked, that a transfer of superfluous cash from a cordial and hospitable dispensation of abundant and palatable viands, not exceeding our means, accompanied by the pleasures of free converse and festive gaiety, which was the old style, (a few cases excepted) to showy pageants; to costly travelling and table equipages; and its heartless, troublesome ceremonials, all far surpassing individual income, which seems to me too generally the style of the present day, is but a miserable exchange of substantial, rational comforts, for empty and sickening show. But the fact is, that our habits of increased prodigality are not displayed in the foregoing enumeration alone, and among those only, who by way of pre-eminence are called "the fashionable world." They show themselves in every thing, and affect in some degree all orders of men; goading into this race of folly, thousands of most reluctant and awkward imitators, who have this additional misery in their failures, (as fail they must) that their consciences incessantly tell them they are wrong. We cannot even shoot a partridge or a woodcock in the present times, without an outfit, at least twenty times as great as was once thought necessary; and such as in "the olden time" would have amply supplied our wives and daughters with their customary habiliments of scarlet cloaks, callimanco shoes, and stuff petticoats, for half a dozen years together. The sportsman who then treated himself to a ten pistole gun was marked down as an idle, extravagant "dog," hastening on in the high road to ruin; whilst in the present day, one or two hundred dollars is quite a common price for the same article. But not to dwell longer on particulars, which might be extended to almost a countless catalogue of patented and unpatented toys for children of all ages—it may truly be said, that the expenses of agriculturists have increased more than in geometrical ratio, whilst agricultural profits, if augmented at all, have been so, only in arithmetical proportion; and like Bob Acres's courage, are so constantly "oozing out at the palms of our hands; for numberless luxuries indulged in, till they are called necessities; that nothing, or next to nothing is left for the improvement of our farms. Ought we then to complain, that little is made by agriculture? Have we any just cause to charge that upon the nature of our profession, which is neither a necessary adjunct, nor any way essential to its successful prosecution? No, if we must all live like Nabobs, without any avoidable reference to disparities of fortune and condition, but to the utmost limit of our means, and as many strides beyond them as our credit will let us go; if the object of our emulation be—not who shall make the best crops, and exhibit the most highly improved farms, but who shall display most taste and dashing style in spending the proceeds—be it so. But for the honour of our cause, never let us seek consolation for empty purses in accusing the earth of sterility, the markets of inadequate encouragement, or the Heavens of partiality in the salutary dispensation of their dews and their showers. Never let us abandon or despair of a profession which is capable of yielding a clear profit of ten or twelve per cent. upon the active capital employed, ac-

companied too by many advantages, and circumstances to recommend it, which can be said of no other trade, profession or calling whatever; never let us exchange it for another, merely because it will not enable us to support a style of living, such as the individuals of no other class, taken as a whole, can possibly sustain and prosper. No gentlemen; rather follow for a while the late prevailing fashion of the Banks, however inconvenient. Curtail—curtail a few out-goings in one direction, and give them another. Live a little less for other people's eyes (as Dr. Franklin would say) and somewhat more for our own. Prefer the proper use, to the abuse of wealth. Bestow judiciously on our lands in grass seeds, plaster, manures, and improved tools of husbandry, a portion of what we are in the habit of taking from them for the purposes of expensive dress, equipage, furniture, living, and never doubt that they will amply repay us in due season. In fact, if we augment our crops, and lessen our expenses, at the same time diminishing our artificial wants, which although infinitely more costly, than wants, that are real, are things much under our own control; half prices will soon answer, nearly as well as the enormously high ones we have been accustomed to receive. If this should be thought going too far, I may, at least assert, that such a system for us, is the only practicable remedy for the pressure of the times; a remedy too, which has this additional recommendation, that it must necessarily (if applied) superinduce more industrious habits, better husbandry, stricter economy, sounder views of the proper pursuits of this life—and above all, a more correct practice of every moral duty.

Tillage and pasturage may justly be considered (as Sully calls them) "the two breasts of the state." They may with equal truth be called, the two breasts of each individual agriculturist, from which he draws all his support, his vigour, and his wealth. Let him cherish them therefore with the most unremitting care, and assiduously pursue all attainable means to augment their productiveness. But to succeed completely in this, he must make himself master of the theory, as well as the practice of agriculture; for in spite of all the efforts of those who know little or nothing of books, to discredit their use, there is no truth more indisputably certain, than that, "Science (to use the words of Sir H. Davy) must be considered as the refinement of common sense, guided by experience, gradually substituting sound and rational principles, for vague, popular prejudices."

A constant progress in our knowledge of Rural Economy, is at all times necessary to agricultural success; but never more so, than when a sudden change from long continued foreign war to peace—a change which the great mass of mankind never consider with reference to its remote consequences, either on the parties, or on neutrals such as we were, has left us under the powerful dominion of numberless factitious wants, at the same time that it rapidly diminishes our ability to gratify them. The farmer who does not now begin to see the operation of this truth, must, to say the least of him, be a very thick skulled fellow; and he who neglects to profit by it, can be considered not far short of stark mad. But although I most earnestly recommend to you sedulously to cultivate both in yourselves, and in all over whom you can exercise any sort of influence, a steady, zealous and active spirit of improvement; let me also take the liberty of cautioning you against that indiscriminate passion for experiment, without regard to expense, which is sometimes seen to animate and govern the exertions of young farmers. If there is any one apothegm or maxim, which the wisdom of ages has collected for us, more applicable than another, as a general rule of conduct

for agriculturists—it is this; “*festina lente*,” make haste slowly; or in other words reflect deliberately and maturely upon all our plans, whether old or new; calculate accurately their advantages and disadvantages; never engage so far in experiments unsupported by any thing but probable conjectures, as to incur the hazard of any serious loss; although a small portion of our time and money should always be devoted to them; and let it be our constant aim to procure a steady advancement both in agricultural theory and practice by making so sure of each step in our progress, as to guard effectually against back-sliding—a practice not less pernicious in agriculture than in morals and religion.

Volumes of admonitory precepts and illustrations might be deduced from the above text; but I shall not tax either your patience, or your politeness further at present, than to conclude with an extract from Young’s, “*Farmer’s Calendar*”—a book too little read in our country, although justly entitled to high estimation. The quotation is from an excellent letter of advice addressed to a young agricultural friend; which although of a local nature in some respects, contains also many general recommendations, applicable to the cultivators of the soil in every country, and of every grade.

“With a small, but increasing family, you have taken possession of your estate, which, if I understand you clearly, is of the gross rental, including the lands in hand of about 600*l.* a year; and that the neat receipt, every outgoing paid, is 461*l.*: this will be your whole dependence, for it cannot be prudent to reckon upon any profit at present from the 180 acres of farm which your father occupied, and which you have in occupation.

“The best advice I can give you is, to consider with particular attention how very necessary a steady and unremitted economy, upon a well-matured system, is, for enabling you to live, and bring up a family, in the class of gentlemen, upon such an income; and to explain as well as I am able, how much, such a plan, will depend on your husbandry being rendered gradually so beneficial, as to make a material object to increase it as the several farms become vacant of which your estate consists; a prospect by no means admissible on any other principle than that of your making 180 acres yield an unquestioned profit before you make any more, and so proceeding with respect to every successive farm.

“And this observation, as well as all I shall make, ought to rest on your having a just idea of what such an income as 460*l.* will enable a family, in such times as these, to effect: for it is less, I doubt, than you conceive. You must remember the many instances of such estates in my knowledge, and, I believe, in your own, which have been dissipated by their owners (I might almost say without dissipation) by their not having a due sense of those increased expenses of living, not marked so much by the price, per pound, of necessities, as by the more luxurious and elegant ideas which have pervaded every class of the people; and which appear in building, fitting up, and furnishing houses; in gardens, table, equipage, dress, pleasures, education, &c. Nothing but a rigid prudence can keep a man in the class he was born in, with any estate that ranks with yours. If you think it possible to associate with men of 700*l.* 800*l.* a year, upon any thing like equal terms, you must either be ruined, or pay too dearly, through a month’s uncomfortable restrictions, for the pleasure (mixed with much trouble) of a day. For want of these reflections, hundreds have been ruined, without vices, without any particular extravagance, and merely by a general notion, that they could go on for the last ten or fifteen years as they did for as many preceding. But the fact is, that the increase of taxes, uniting with the increase of luxury, with money flowing in from very different sources than any enjoyed by country gentlemen of small estates, have doubled, and in many cases trebled the expense of living; so that, if these heavy burdens be not carefully provided for, in the first instance, distress, debts, and ruin succeed.

“Let me then most earnestly advise you, in the first year, to square all your expenses to only two thirds of your sure and certain income. You cannot

deduct less than 61*l.* for taxes not attaching to the land; there remain 400*l.*; two thirds of which are 266*l.*; on no account spend one shilling more.

“Now, you will observe, that this is directly the reverse of what we commonly see. The first year a young couple marry, they make an extra show; and the first year a man comes to his estate, he usually makes some addition to, or alteration in his house; or he pulls down walls, throws down new hedges, clears about him, and gets into a train of improvements, which it is possible he had been meditating before he came to it. Girt windows, awkward dark passages, windy floors, and a hundred other things, are nuisances; and then friends are ever ready with projects and advice—“nothing more palpable: the improvement speaks itself!” mighty well! But turn a deaf ear, though the expense be 51*l.* When the first year is over, and you have the third of your income, or 133*l.* in pocket, and not a debt upon earth, you may consider what is best to do with it; but to lay out a shilling before you know whether you will have it in a real surplus, is upon system, the conduct which has sent so many little estates the road, I hope yours will not travel. The observation is equally applicable to your agriculture; that is a very pleasant employment, and improvements and experiments are very pleasant also; but for one year, at least, go on as your father did, without variation; he was a prudent man, and did not lose; at least know by trial that you can go on without loss, before you listen to any proposals of improvement. “But perhaps it will be said, how are you to live upon 261*l.*? Firmness and resolution will do any thing; and when the comfort of your whole life is at stake, I am sure they can never be more powerfully called for. You must proceed upon plan. Your own cloaths and Mrs. —’s, and your children’s, so much; servant’s wages, and all other payments, not for house keeping, so much. Deduct these from 261*l.* and divide the remainder by 52: it gives your weekly income. By paying ready money for every thing, you will know in seven days if you exceed, and how much, and then can regulate accordingly. Such a systematic method of going on has very little trouble in it, and it is positively safe, which no other way to be devised is. Of all other things, be careful to keep accurate accounts of your expenses, under every head, and of your farm, and let them be in effect, as well as theory, the basis of experience; they will prove so; but remember all is confusion and danger; when you create bills, for every thing depends on ready money transactions of every kind. A prudent man would live on a crust, and go in rags, rather than live upon any sort of tick; for, otherwise he lives at the rate of which he is ignorant; he spends, he knows not what; he is subject to imposition; he is in difficulties before he dreams of any; and his life becomes embittered, for want of a few grains of resolution at setting out.

“Another point is, to consider consumption as expense. You have found wine in your cellar, perhaps other things; if you take out a dozen, nay a bottle enter it as paid for; by this you will avoid an obvious fallacy. Put the money by itself it will be ready to replenish.

“Now mark the advantages of such a conduct; at the end of the year you will have 133*l.* cash in hand. You have had a year’s experience; you reflect on a very restricted, perhaps uncomfortable way of living; you may then consider whether it is better to go on so, and expend such a surplus in such improvements as you have observed to be most wanting, or whether it will be more advisable—to live better, and keep other things as you found them. You are master; you can do either; or you may mix the plans, live rather better, and improve a little; but with such an income, the likely result is, that you will find the expenses of living comfortably, will leave little for any thing else.

“One thing, however, there is, which ought never to be forgotten. You are a Christian, and I hope a good one, sufficiently to know, that the wants of your poor neighbours are a call, to which he only can attend who lives with economy. If you spend all on yourself and family, what can you do for others? And though your income be small, yet, comparatively, it is very great, and this is a demand which ought never to be waved. None can expect God’s blessing, who do not think of

this call upon their humanity in the arrangement of expenses.

“Let me further urge you most warmly to lay down a plan of expense, at all events, that leaves you some surplus at the end of the year. I do not think that any prudent man should regularly spend more than three fourths of his neat income; such a saving, not for the purposes of hoarding, or growing in any degree rich, is essential to his comfort. If he cannot attain one-fourth, let it be one-sixth, or at least one-eighth; at all events let it be something; without something free at the year’s end, it is impossible he should ever be in tolerable comfort.

“I have heard a right reverend prelate, of great knowledge and ability, declare, that a country clergyman of 300*l.* a year, could not afford to drink wine; the assertion was received with some doubt, not by me, for I believe it is correct, and that calculation would prove it. Your free income of 400*l.* will admit of no excess in any thing, which is easily proved.—Suppose you allow 60*l.* for the dress of yourself and wife, and 20*l.* for that of your children, (being young;) wages of 2 maids and a boy 15*l.*; garden labour 10*l.*; necessary repairs of furniture, books, newspaper, stable sundries, garden ditto, &c. 15*l.* here are 120*l.*; remain 280*l.*; this is 5*l.* 8*s.* a week for house keeping, medical assistance, charity, and every unforeseen expense; and this with children that are young. There is further to be deducted that saving, which at all events is to be looked to in the first instance, be it but the eight shillings.

“Is it not evident, from this account, that such an income must be managed with an economy approaching privation in many articles, or distress must enter? In conversation; an estate of 600*l.* a year is sometimes talked of in a style that shows the world does not calculate. The gross income has no more to do in such accounts, than the income of the Great Mogul; bring it to the neat receipt, taxes, &c. paid, and then you will find ground for very different ideas. But these few items are sufficient to prove, that an estate of 600*l.* a year will not permit its owner to keep a footman, nor any carriage beyond a whiskey, without drawing on a farm in hand, or reducing house keeping to penury rather than economy. From all which it is sufficiently clear, that such a country gentleman must farm, and with success; or he must be deprived of many very essential comforts of life.

“Such accounts explain to us the reason of little estates being every where swallowed up by large ones, nineteen young men in twenty, and many old ones also, who come to small estates, are ruined before they are well turned in their new situation; and this is for want of calculating their abilities, examining what they can spend per week, and paying ready money.

“As to your husbandry, you are to remember that this is the only possible means you have of bettering your condition in life; by gradually increasing your farm, (but never doing it without the land in hand being profitably conducted,) you may very materially improve your income: and by thus advancing in a branch of industry, you take advantage of that rise of times, which crushes people of small incomes, who cannot advance with the progress of others. As you have no particular pursuit to occupy your time, I do not see that you can have a better than this. Your soil is not the most favourable, but it does not demand any very expensive exertions; the tract being small, you are to remember that great economy and carefulness are necessary, and upon this principal; because a very small loss in labour, for want of attention, by perpetually recurring, will grow into a material object upon the whole year’s account. Very many farmers save more than they make; and others, after deducting the value of their own labour, and that of their children, do not make more than a living. Except upon particular soils, it is not a profitable employment of money compared with many others; and I urge this the rather, that you may be assured it will not answer, unless well followed and judiciously conducted. When I come to you, I will hear what has been the management, and put you in a train that it shall be safe and beneficial. I will then talk with you upon what you have written of *new Leicester sheep*, and some other things, all of which I beg you

to postpone not only now, but till a year's account is made upon the present management, that we may know the points in which any change is advisable."

There is one other short passage from this truly useful author, which I beg leave to add; and with which I shall conclude.

In contrasting the style of living prevalent among those farmers, who according to his opinion live, as they ought, and the prevailing mode of those who live, as they ought not, he says—"I have remarked in great numbers of farmers' families, such a due measure between the intent and the execution; such a harmony between the ideas and the style of living; so little pretension and so much enjoyment; such a steady preference of comfort to appearance: and such a proportion to regard in the mode of living, between desire and possession, that it is difficult to enter their houses without seeing many marks of happiness, and but few seeds of moral misery: but roll an inquisitive eye through the houses of their betters, and see the fearful space between the objects desired and those possessed; the anxiety for keeping up appearance; the breathless expectancy, and the insipid reality; wounded pride, active envy, and jealous rank, the whole exterior would justify the suspicion, that education was given to people, only to sharpen the ingenuity with which they can make themselves miserable. I never quit the house of a man where the style of life is at all showy, or tending to it, without regretting the folly that buys appearance at the expense of ease.

"One of the great miseries of education in these classes is, that little difference is found between that for 1000*l.* a year, and that for 20,000*l.* Millions of young men have every possible idea of great expense given them, but with slender means of gratifying the smallest. What ample preparation for future misery!"

One word more of admonitory reflection in addition to Mr. Young's and I have done. Early imprudencies rarely, very rarely fail to embarrass a man long after he has deeply repented the folly of his ways; and what greatly aggravates the mischief is, that the consequences of these excesses are almost always visited upon his innocent posterity. It ought to add double force to the numberless motives for prudence and sound practical morality in our conduct—that although the world be some three or four thousand years old, the whole experience of centuries past, scarcely affords any useful lessons to those who have not purchased by their own personal sufferings. Not one young person in a thousand can be made to believe, but that the numberless shipwrecks sustained by those who have sailed before us, on the great tempestuous ocean of life, have all been caused by some error of calculation, some mistake in "the reckoning," which his superior sagacity will detect, and his superior discretion be powerful enough to avoid. Another and another scene of ruin still succeeds; yet still the buoyant influence of blessed hope elevates the sanguine presumptuous heart of inexperienced youth to the anticipation of fairer prospects, smoother waters, and brighter skies.

Kitchen Garden, for February,

From the Practical American Gardener, published by Lucus Fielding, jun.

As the kitchen garden is the most useful, as well as absolutely necessary department, in order to have a full supply of the necessities of life, it is therefore of the utmost importance to pay some attention to the choice of soil, situation, and extent, as well as to manure it sufficiently for the regular growth of the crops.

A full supply of manure, compost, or rich soil, should be procured, and the plants will thrive much better, should the manure, if stable dung, be left in a heap and turned over frequently for some months before used) also that the ground in general be trenched two spades deep, as directed in Janu-

ary, and the manure well mixed throughout. This work, where it can be conveniently done in the fall, will amply repay the gardener for his toil, as well as enable him to expedite his business in this and the next month, when the employment will demand full attention, as, in most cases, simply spreading the trenched ridges will be sufficient.

The compartment for peas, Windsor beans, kidney beans, &c. need not be more manured than rich ground for wheat or other grain; and be careful not to put any dung on (even though it may be entirely rotten) in the spring.

Situation, Soil, Water, &c.

A moderately low situation is to be preferred, as being less exposed to cold cutting winds in spring, and more retentive of moisture during the summer months. If there should be a moderate slope, to the south it will be desirable; this, however, is not absolutely necessary, if it be not overflowed in winter, but it should be moderately dry, and then by manuring and proper attention, good crops may be produced. A loamy soil, either of a brown or black colour, is the best, more particularly a light, sandy, hazel loam. A clayey, strong stubborn soil must be improved by mixing sand, ashes, and other loosening light substances. A sandy soil, which is of a very light, sharp nature, must be fertilized by plenty of rotten dung and strong earths.

Water is a very essential article in a kitchen garden in summer, to water all plants newly set out, and also such as cannot subsist without a due supply of moisture during the drought of that season; therefore, one or more reservoirs of water should be formed in the most convenient part of the ground, and kept constantly supplied with water for this purpose.

Fences for enclosing the ground.

It is absolutely necessary to have an effectual fence around the kitchen garden, both for security, and to defend tender and early crops from severe winds and frosts. It should be laid out either square or an oblong square, which experience has determined to be the best.

The garden may be enclosed, either with a high board fence, (which should be tongued and grooved,) or where it is not to raise wall fruit, a hawthorn hedge will answer; but where wall trees are intended especially in the northern parts of the United States, no fencing is equal to brick walls, which, by reason of their retaining and reflecting the sun's heat, are the most effectual preservatives of the latest and more delicate kinds of fruit.

Hot-walls, for forcing by fire heat, &c. are often erected in large gardens; for an account of which, see the fruit garden for January.

Laying out the ground.

The ground must be divided into suitable compartments or squares for regularity and convenience. A border must be carried round close to the boundary walls or fences, about six or eight feet wide, in order to raise the various early and other kitchen garden crops, and also for the benefit of the wall trees if any. Next to this border a walk should be continued all round the garden, from five to ten feet in width. The remaining part of the ground may be divided into plots of about 100 feet square, round each of which, a border may be laid out of about three and a half feet wide, in which, where the garden is not large enough to admit of pleasure grounds, the various annual flowering plants may be raised; these borders may be edged with thyme, savoury, sage, hyssop, lavender, sweet marjoram, &c. which will produce a useful crop, especially if designed for the market. The beds may then be laid out evenly, (about three and a half feet wide,) by a line, and the walks between each bed trod down firm, and where it is intended to be neat, the edges of the beds, as well as of the borders, may be cut down with the spade, by a line, and about an inch of earth thrown out of the

walks on the beds, and carefully raked over them, the whole will be then in order for planting; but this part of the work can seldom be performed in the middle states until March, except in the warm borders adjoining the walls or fences, which are therefore very valuable for early crops.

Culture of the Ground.

With respect to the culture of a kitchen garden, it consists principally in a general annual digging; proper manuring; sowing and planting the crops correctly; pricking out, planting and transplanting various plants; keeping the ground clean from weeds, frequently loosening the soil with the hoe, and watering the crops occasionally in the drought of summer.

Digging must be performed early in the winter, or as soon in the spring as the frost will admit of it; also as often as any new crops are to be planted at any season of the year, and at every digging a fresh supply of rotten manure should be used; except for peas and beans. In the spring digging, it would be advisable to pare off about two inches at the top and turn it into the bottom of the trench: this should be done two spades deep for carrots, parsnips, beets, and other deep rooting esculents; for other plants, one spit deep may answer.

Manure.

Any kind of dung, or compost of dung and earth is proper. Horse stable dung rotted, suits all sorts of plants; well rotted neat's dung, or a compost of different kinds, as horse dung, neat's dung, hog's dung, farm yard manure; mulch, ashes, lime, rubbish, broken small, saw dust, rotten tan, having all lain together, and frequently turned until well rotted, will make excellent manure.

Appropriation of the Borders, &c.

The south border must be appropriated for raising the earliest plants, as early peas, beans radishes, spinach, lettuce, carrots, small salad, kidney beans, &c.

The east and west borders for the succession of the foregoing early crops; and

The north border, being shady and cool, will serve for raising, and pricking out many plants, slips, and cuttings in summer.

The internal parts, called the quarters, are always to be appropriated to raising the larger principal crops, such as cabbages, cauliflowers, broccoli, coleworts, peas, beans, kidney beans, onions leeks, carrots, parsnips, beets, potatoes, turnips artichokes &c.

One of the quarters may be allotted to gooseberries, currants, raspberries, and Indian corn.

The gooseberries may be planted in rows at about six feet distant, and the same in the rows, and trimmed up with a single stem about 18 inches, and then the crown.

Currant bushes may likewise be planted in rows about six feet distant, and about two feet asunder in the row; stakes may then be driven down on each side of the rows, so as to form an enclosure about two feet wide the whole length of the rows, and about three feet high; nail two strips on each side of these stakes, one at the top, and the other about half way down, which will keep the bushes within due bounds, form a handsome hedge, and produce large fruit and a plentiful crop. This will answer for both the white and red. The black currant should be planted from two to three feet apart in the row, and the trellis should be allowed six inches more width than the other, also six inches more in height.

Raspberries, both the yellow and red, to be

planted in rows about six feet asunder, and the rows about nine feet apart. If good posts are set in the ground, about six feet out of the ground, and about twelve feet apart along the row, the bed allowed to be three feet wide, the posts planted opposite to each other, and iron hoops nailed thereto, near the top, and about half way down, and rails of about thirteen feet in length, and one and a half inches thick, cut in with a saw so as to fix on the iron hoops, the plantation will have a fine effect, both as to its appearance and production.

Indian corn, for an early crop, will suit in this quarter, and if the low corn is procured from the northern parts of Vermont or Canada, every other year, as it materially changes when planted in a southern climate, ears for the table may be furnished about the time of wheat harvest; for the culture of it, see March.

Cucumbers and Melons.

Should the raising of early cucumbers and melons not have been begun last month, it may be undertaken in the middle or latter end of this, with a greater prospect of success, observing the directions given under this head in January.

The seed hot-bed which is to be made now, either for cucumbers or melons, must be managed, as well as the seed sown, as directed in last month; also observe that to be well supplied with cucumber or melon plants, in order to have a reserve for accidents, which may and will happen, as the plants are very tender, and the season difficult, sowings ought to be made every three or four days, both in last month, and also in this.

Ridging out early Cucumbers and Melons.

Such of the plants as were sown last month, and have been preserved in a good growing state may now be fit for ridging out into a larger hot-bed, there to produce their fruit.

A new hot-bed or beds should therefore be prepared for these plants, agreeably to the directions given in January. The bed being finished, put on the frame and lights, tilting the upper end of the lights, that the steam may pass off. In a week after the bed is made, level it, and again put on the frame; and if the violent heat is over (but be careful to let that pass off first,) lay in the earth, of the sort before directed; make a hillock of this earth about ten inches high under each light, the spaces between the hillocks and quite to the sides of the frame, to be covered only three inches, which is to be added to, when the heat is become moderate, until it is raised as high as the top of the hillocks; this addition is to be made by degrees. As the plants were directed last month to be planted in pots, three of the plants now are to be turned out of a pot, with the ball of earth entire, into each of these hills; the pots should have some water given them the day previous to transplanting; take the strongest plants, and when the ball of earth is taken entire out of the pot, make a hole in the middle of the hill, and place the ball with the plant entire in the hole so made, closing the earth well round it, and about one inch over the top, to the stems of the plant, shut down all the lights close till the stem rises strong, when they must be tilted behind sufficiently to give it vent.

It will now be necessary to use every precaution in order to support a constant temperature in the hot-bed, also tilting the glasses to give air, and to line the outside of the frame with litter, &c. Some gardeners are so attentive to this part of framing, that they ascertain the degrees of heat by plunging a Fahrenheit's thermometer in the hot-bed, and have fixed the following standard.

The temperature for some of the principal esculents, forced in frames, or otherwise, should be as follows.

	MINIMUM. at night.	MAXIMUM. in the day.
Sea Kale	50 degrees,	58 degrees.
Asparagus	50	60
Hardy natives, in general	50	60
Potatoes	60	70
Kidney Beans	60	70
Cucumbers	60	70
Melons	65	75

The gardener is directed in the former part of this paragraph, to add earth between the hills of the cucumbers and melons by degrees, when the great heat abates, to which this additional direction may now be given; should the roots of the plants appear through the sides of the hills, the earth between the hills may be taken away, and fresh earth added, which should be moderately dry, and as warm as the temperature of the bed; with this cover the roots of the plants, and every three or four days add more, until it is the height of the hills. This earth may be put into the frame for one night, or until it has acquired the temperature of the bed.

Of pruning or topping Cucumber or Melon vines.

Both cucumber and melon vines will produce fruit earlier, if the first runner is stopped or pruned early, and the cucumbers planted last month will require this operation to be performed about the middle of the present month; the melons will be somewhat later.

In the centre of the plant at the bottom, of the second rough leaf, the first runner commences, which appears like a small bud, this is to be taken off close, which is best performed with a pair of sharp small scissors, but be careful not to do it so close to the plant, as to wound the joint from whence it issues.

After the plants are thus pruned, they will gather strength in a few days and be more stocky, and in about ten or twelve days will begin to send out two or three runners, which are the bearing shoots, and will probably show fruit at the second or third joints, but the runners if not pruned off, would prevent these lateral branches from putting out as soon, and besides might fill the frames without producing any fruit. The weakly vines should be cut out, and also those which are too much crowded. If the bed is properly managed, and the plants have succeeded well, fruit will begin to appear by the latter end of this month or beginning of next, on the cucumber vines. The melons require about six or eight weeks longer.

To impregnate the young fruit of Cucumbers or Melons.

The flowers of the cucumbers and melons (as well as the squash and some other running vines) are male and female, separate on the plant; the female flowers produce the fruit; the males are commonly called false blossoms, yet they are ab-

solutely necessary for the fecundating the female or fruit flowers, according as they come into blossom, and in hot-beds, for early fruit it is necessary to assist nature in this important task, by applying the central anthera of the male, to the stigma in the centre of the female flower.

This business of setting the fruit in cucumbers, &c. in hot-beds, where the air cannot carry the male farina to the female stigma, is a curious and absolutely necessary operation, as may be conceived by the profusion of farina, which is scattered by Indian corn, not only over the silk (or umbellical cords) of the ear, but is wafted by the winds from one field to another. In order to set the fruit in the early plants of cucumbers or melons in hot-beds, observe the following particulars. Cucumbers and melons as before observed, produce male and female blossoms distinct on the same plants. The female or fruit bearing flowers are easily distinguished from the males; the former having always the embryo fruit placed immediately under the base of the flower; that is the embryo fruit shoots forth with the flower bud on its top, visible at its first eruption from the stem of the plants, while the male blossom is placed immediately on the top of its foot-stalk, without any appearance of fruit at its base. The anthera of the male is situated in the centre of the flower, and is furnished with a fine yellow farina or dust, designed by nature for fertilizing or impregnating the female; but which as before observed, in early plants in frames, not having the full air, &c. requires the assistance of art; therefore, according as the female blossoms expand, be careful in the same day, or second morning at farthest, to pluck a fresh, full expanded male flower, pull away the petal or flower leaf, then holding it by the stalk, apply the remaining anthera or male in the centre, to the stigma or central part of the female blossom, twirling it about with the finger and thumb, to discharge some of the fecundating powder on the female organ; and thus the fructification is effected, which will be obvious in two or three days, by the young fruit beginning to swell; always, if possible, procure a fresh male blossom, with its full portion of farina for each impregnation. Without the assistance of the male blossoms, the females, having the embryo fruit at their base wither and decay, and the fruit soon turns yellow and drops off. After this operation, the fruit of cucumbers, will in two or three weeks, arrive to a proper size for gathering for the table, provided, the plants have a generous and vigorous growth. As in mild seasons the cucumbers may show fruit in this month, the method of impregnating is given at this time, but it will more frequently be necessary to perform it in March.

8 To force Asparagus.

Plant a quantity of three or four year old roots, in a hot-bed, under frames or glasses, to produce a succession, for early gathering, as directed in last months, see September, October, November, or if beds are provided, proceed as in January.

Artichokes to secure the plants.

If the weather is severe, defend each plant, by laying around it, the driest litter, or coarse straw.

Planting Beans.

As a tolerable crop of the early mazagan, early Liston, long podded, white blossom, large Windsor, toker, Sandwich, and other kinds of

the vicia faba of Linnæus (not the kidney bean) cannot be raised in the United States, especially in the middle and southern parts, unless they are put in the ground, as early as the frost will admit, they should therefore be planted either in this month, or the beginning of March, as they will not be liable to be injured by any frost, except in very extraordinary cases. A strong, heavy soil is the most suitable.

Plant the small early kinds, in drills, three feet asunder, and the beans two or three inches distant in the rows, and covered two inches deep.

The large kind, such as the Windsor, token, Sandwich and broad Spanish, should be planted at the distance of four feet asunder, and somewhat thinner than the small kinds.

The plantings may be continued until the middle of March, but those planted after that season will not be so large or productive.

Sowing Peas.

Towards the latter end of this month, prepare a south border of light, dry earth, raise the earth into narrow sloping ridges, about a foot broad at the base, and nine inches high, and at the distance of three feet from each other; ranging those in a south-west direction, from the north side of the border, then on the eastern side of these, about half their height, sow your drills of peas. In this situation they will have all the advantage of the morning and mid day sun, and advance in vegetation, much more rapidly than if sown in the ordinary way.

Sow each sort separate, and pretty thick in the drills, covering them not more than an inch or an inch and a half.

Peas may also be forced in hot beds if required, or they may be sown in pots and planted out afterwards in other pots, when they have attained about one or two inches in height, if there is the convenience of a hot-house.

Cauliflower Plants.

The early autumnal sown plants which are in frames, must be protected with a covering of boards, mats, &c. without the assistance of glasses, and never have powerful sunshine admitted to them while in a frozen state.

Those plants which were raised from seed last month, should as soon as they arrive at the size of about four or five inches, be transplanted into a new moderate hot bed, as they will thus bear transplanting much better than if left in the seed bed.

When transplanted and managed as directed, and the proper season arrives for planting them out, they are to be taken up separately, with a hollow transplanting trowel, preserving as much earth as possible about the roots of each plant, and deposited where they are to flower; thus treated they will be scarcely sensible of their removal; will continue in a constant regular state of vegetation, and if protected for ten or twelve days with suitable coverings from too powerful sun and also at night, success will crown your labours.

Continue to give a due portion of air to your cauliflower plants at all favourable opportunities.

Sowing Cauliflower Seed.

Sow some cauliflower seed in a hot bed, the beginning, middle or latter end of this month, to succeed those sown in January.

Cabbage Plants.

Continue to protect your autumn sown cabbage plants, from the severity of the weather, but be careful that such as are under frames, and have got frozen from the extreme severity of the weather, are not exposed to the strong influence of the sun, until the earth, in which they are, is gradually thawed, which must be done with great caution.

The cabbage plants which were sown last month, should as soon as they have arrived to the height of three or four inches, be transplanted into a new hot bed, at the distance of three or four inches from each other, each way.

Cabbage Seed.

You must now sow a full crop of cabbage seeds, such as the early Smyrna, early York, early dwarf, Battersea, and early sugar loaf, to be sown in a hot bed.

Towards the latter end of the month, you may sow these kinds on a warm south border, to be covered with frames and glasses, or on slight hot-beds, to be covered as before, or with paper frames, boards, or mats, occasionally.

Begin now the sowing of the drum-head, flat dutch savoy, red pickling cabbage, and other late cabbage seeds; these will produce larger heads and earlier than if sown much later.

Radish Seed.

In order to have radishes to succeed those sown in January, let some of the early kinds be now sown on a slight hot bed, and treated as before directed.

Towards the end of this month, if the weather is mild, and the ground open you may sow in a warm border, some short top, early frame, white and red turnip rooted radish seeds, keep them separate in the beds. These, if they succeed will be fit to draw early in May.

On another piece of ground sow salmon and purple radish to succeed the former.

A small portion of spinach and lettuce seed may be sown amongst them without injury to either.

Carrot Seed.

If carrots are desired at an early season, some seed may be sown in a slight hot bed towards the middle or latter end of this month. They will answer without glasses, if the frame be covered at night, with mats, and also in severe frosty weather, in the day time. The early horn carrot should be chosen.

Parsnip seed.

Parsnips, being very hardy plants, and the seeds remaining in the ground a long time before they vegetate, may be sown as early in this month as the ground can be prepared to receive them.

Those sown as directed in August, may now be thinned so as to be about eight inches from root to root, and carefully cleaned from weeds, the ground stirred about them to encourage a lively growth, but if this cannot now be done for the frost, do it as early as possible.

When the ground is bound up by frost, the intelligent gardener will readily perceive these directions are designed to expedite the important task of getting his seed in the ground as early as possible.

Spinach seed.

As the prickly seeded spinach is the hardest kind, sow some of it on dry warm ground, about the latter end of this month; sow the seed thin and regular, and rake it well in.

Lettuce Seed.

If the weather is mild and the ground in good condition about the latter end of this month, you may sow some lettuce seed, which ought to be defended by a wall, hedge, or board fence.

The kinds to be sown at this season, are the early curled and common cabbage lettuce, if intended for small sallading; to be sown very thick, on the surface, after the ground has been carefully raked over, and then covered; observing that these seeds require but a slight covering of earth.

You may also sow other kinds, such as the white or green cos, and spotted cos, or if to produce heads you may sow the white Silesia, grand admiral, large Mogul, brown Dutch, or New Zealand lettuces, good hard heads; for this purpose they must be sown very thin, and when of sufficient size transplanted into different borders; leaving a sufficiency in the seed bed, which will head earlier than those which may be transplanted.

Lettuces which have stood the winter, closely planted in frames, should, if expected to grow large, be thinned about the latter part of this month, to about a foot asunder. Be careful to pick off all the decayed leaves, and to stir the earth about the roots.

Parsley Seed.

Sow both common and curled parsley seed, on a warm border.

Celery.

A small quantity of celery may be sown towards the end of this month, in a small bed of light, rich earth; for an early crop, the best kinds are the solid and red celery.

Kidney Beans.

Where early kidney beans are wanted, they may be planted in this month in a hot bed, made as before directed. The best sorts for this purpose are the early cream coloured dwarfs, early speckled white and yellow dwarfs.

But where there is a hot house, early kidney beans may be raised with much less trouble, and a greater certainty of success than in hot beds.

Mushrooms.

Mushroom beds must still be well defended from heavy rains and frosts, both of which would destroy the spawn.

There should be a covering of straw, not less than 15 or 16 inches thick on every part of the bed, and during the cold wet weather, large garden mats should be spread over this, to secure the bed more effectually from snow, rain or cold, and if at any time the wet has penetrated, and wet the straw, it should be immediately removed, and replaced with clean and dry straw.

Beds may be made under open sheds, or frames with roofs constructed for that purpose, which might at any time be removed; this would protect them from wet, especially in the winter season, by which the bed is liable to be destroyed.

New mushroom beds may now be made; for the method of making them see October.

Paper Frames.

Paper frames made like the cover of a wagon or the roof of a house, with two pitches in the upper part, will be a cheap security for many plants.

A frame may be made as long and as wide as the bed it is designed for, and strongly morticed and tenanted; where the wagon cover shape is made use of, hoop poles may be arched from one side to the other, at suitable distances along the frame, from one end to the other; along these hoop poles fasten strong twine at the distance of 8 or 10 inches apart, and also over the tops, then over the whole, paste large strong paper, which must be damped a little in order to have it straight when dried, and after it is dry, paste strips of paper also on the inside over the twine. When the whole is perfectly dry, give it a coat of linseed oil.

The roofed frame may be made in the same manner, only let the roof open each way toward the ridge, gable ends of wood, must of course be morticed into the frame, and at the sides and also

the ridge, strips fastened for the openings of the roof to be fastened down to.

These frames, if well painted, will last for several years, and may be used on several occasions.

Southern States.

Georgia, South Carolina, and several other of the southern states, this month, will afford the gardener the same active employment as March compels those in the middle states to give their attention to, and of course they will find the necessary directions in next month.

In the eastern states and the more northerly parts of the union, hot beds and hot houses will claim a longer attendance, but as the middle and latter end of March and beginning of April will probably relieve the ground from its frost, the plan pursued in this work will be useful to them also; observing that they must be prepared, as soon as the severe frost will admit to expedite their plantings and sowings.

FOR THE AMERICAN FARMER.

Elmwood, Feb. 10, 1820.

SIR—Some weeks past, one of your correspondents made a request, to be informed about the value, burning and use of shell lime. If my small experience will be of any service to him, and, no better information comes to hand, you are at liberty to use it. You will perceive that I have theorised a little, and extended the subject to the use of lime in a particular compost, as worthy the attention of those who are desirous to use every practicable and economical method of improving their exhausted lands; I have burned and used oyster shell lime on my land some years. The shells are in primo a cheap article, costing about one cent per bushel: but whether they are ultimately cheap I am not so certain, nor can it be determined, without a series of relative experiments with stone lime, as well as by calculating the distance and expense of hauling, the conveniences of wood, &c. I burn about 450 bushels, or 18 to 22 horse cart loads in a kiln, formed after the following plan: Four trees from 16 to 18 feet long are laid parallel at three feet distance, the two exterior trees about one foot diameter, and green; the two interior half that size, and dry; these lesser are to be raised on stones to a level with the larger trees. When cord wood is laid over these four trees they of course form three flues, which are to be closely laid and stuffed with very dry small brush. Two tier of good stout hickory logs (such as fire wood) should form the first stratum to receive the shells, and then a frame laid on at the extreme edges. At the flue ends of the kiln, the logs forming this frame should be large enough to rise some inches above the cord-wood, whilst the other two laying on the wood need not be more than five inches thick. This frame is to keep in the base of the shells, and this and the other frames requisite, are to be secured at the corners by notching, and by small branches left on the trees, or in case these fail, by some pieces

of old iron hoops punched and nailed to each log; for if these slide, much mischief will be done by the shells pouring out and the kiln careening—Eight loads of shells may now be laid on, taking care as they rise above the frame to lay by hand, some shells at the exterior all one way, as oystermen pile some of their but oysters for show.

One or two courses will greatly assist in keeping in the mass, and to form the kiln more perpendicular. When this first great portion is up and nicely leveled, another single tier of oak wood may be laid on, and another frame and more shells, say fifteen inches deep; and so on as long as any can be laid on, making the strata of shells thinner and the wood also as they ascend, till it ends in a blunt point. Some cord wood must now be laid end upwards from the earth to the second frame, on the sides of the first large logs that form the flues. These will give support to the kiln as well as burn the exterior shells; for the kiln is apt to sink irregularly, and here I may observe, that the smaller logs that form the flues, are designed to give the kiln a disposition to sink interiorly; a reverse settling would throw great quantities partially burned on the ground. Some very long and stout brush should be provided to burn the exterior shells at the flue ends, where cord wood could not be set up; this may be fired after the kiln has been half burned and continued. A quarter of a cord of dry wood should be kept to throw into the flues, as the brush burns away.

The kiln should be fired in a calm evening and strictly watched till morning. When the fire is too fierce and driving through the flues, it may be checked by stopping the flues with some shells or earth. If the wind rises after firing, some long brush must be immediately laid on the windward side and fired; for the heat will be driven from that part and the shells left unburned, unless it is defended and compensated by the exterior fire of the brush. The kiln will be cool in two days, and fit to scatter in two weeks or sooner, if the weather is damp and rainy. Care must be taken that it get not too much wet, from being placed in low grounds, or by heavy rains, for if it once gets thoroughly slacked and wet, it will give more trouble than inexperienced persons are aware of, and, moreover, will require a large quantity of earth to divide it for scattering.

As near as I can judge from appearances, the shells will lose thirty-three and a third per cent. (by burning) in measure; as to the quality and power of the lime. I am not able to give the comparative value between this and stone lime with any accuracy, owing to the scarcity and inferior quality of the stone lime usually sold in my neighbourhood. But considering the weight of the stone lime its greater increase when slacked, and its superior causticity. I have allowed three bushels of shell lime to supply the place of one of good stone lime, and have therefore dressed my fields with 180 to 200 bushels of shell lime per acre, as a full complement, but never exceeded 66 to 70 of stone lime: nor do I think that I have been far from a correct judgment, though time must show. I have applied lime in various ways. The

most eligible plan appears, that of spreading it on from the kiln, and ploughing it in immediately, that it may never form a hard mortar, but continue caustic and soft, and spread its lime water through the field, which is the product of the first solution it undergoes, the most obvious one and the most speedy to act. This is so conspicuous, that I have seen contiguous unploughed ground on a declivity, by receiving the limewater more speedily benefited, than the ploughed field where all the lime was deposited.

The next best plan is to apply it on grass, where it has no opportunity of forming mortar. The mixing it with earths and the harrowing it on the surface, is the worst mode that can be devised, it will then get into small granules of mortar, that will lay two years or more undissolved, and of course unproductive. This I have experienced to my disappointment.

It would be well if we could contrive to spread lime on land, at a time when it would require several ploughings and harrowings to get it in order, for then it would be more uniformly mixed, and readily combined with the other earths; this we find to be necessary even with stable manure, how much more necessary with such a (comparatively) insoluble earth as lime.

In every object the farmer has need to take time by the forelock, but in the use of lime it is indispensable; for he will be disappointed if he has any expectation of seeing a very marked improvement in his soil in less than two years; which interval may probably be as well spent in turning it over occasionally, as in attempting to draw on it for a crop; nor should he even at the end of two years expect to reap a good crop, without the aid of more quickening manures, (obtained from matters that have been once organized) to act as a milk to the plantule, till it acquires vigour and strength to draw up and digest the lime, and clay, and flint, which compose the mother earth, and when digested the more fixed constituents of the plant.

Let the farmer curb his impatience by reflecting that he has done no more than to make his land limestone land, by the stratagem of transporting and burning limestone or shells.—In which scheme sixty bushels of burned stone have supplied the deficiencies of 600, or perhaps 6000 bushels of unburned stone, and as limestone is nearly insoluble and lime soluble, it is a fact past denial, that its activity on land is in strict proportion to its solubility, and dependent thereon. The causticity, effected by burning, is its first and most obvious state of solubility, in that state readily dissolving and forming limewater. Sursaturation* with carbonic acid is another mode of solution. Corrosion and neutralization with mineral, animal and vegetable acids, a third mode. These three modes

* Lime would be much more readily dissolved by carbonic acid, and more freely absorbed after burning, than if that operation had not been performed.

are exterior and without the plant. But the digestive powers of the living plant are probably as capable as the animal stomach, to digest without the aid of acids or alkali, a definite quantity of the fine elutriated materials of the soil, which pass into the plant by the help of the water it absorbs, thus making a fourth mode of solution. And although lime in combination with certain acids, as in gypsum, may sometimes be nearly inactive on particular soils, from causes not well understood, or by decomposition; yet I maintain that whenever plaster acts, it is merely as *lime more soluble*, and, of course, more efficient, though more transitory. Thus bearing the same relation of solubility, activity, and transitory action to lime, that lime does to limestone.

In elucidation of this theory, I may state in rough calculation,

That 1000 bushels of pounded limestone would enrich an acre of ground for one hundred years.

Sixty bushels of lime, the same article burned, would do the same for fifteen years.

Four bushels of lime made more soluble by acids, as in gypsum, would accomplish the same for one or two years.

The complete solution of lime in muriatic acid, would render it instantly active, but at the same time like any other salts, would require great management to prevent its too sudden action on the plant, and quickly running off the soil. It would require small quantities mixed with other materials to be frequently applied, and should never be used in low ground, declivities, or wet hills. I mention this merely to show that on grounds accessible to sea-salt, as on the coast and river sides, that if gypsum was decomposed and muriate of lime formed, that the muriate might not compensate for the damage. It has been said that gypsum does not answer well on such places. The great use of plaster on limestone land in Pennsylvania, is no argument against my theory, for I look upon it exactly in the same light, as using manure water on garden grounds not sufficiently dunged to act well without such quickening aid.

Sir H. Davy has made every state and preparation of lime to act on different principles in agriculture, and has thus destroyed the unity we ought to look for in a good theory; how any person acquainted with agriculture, chemistry and vegetable physiology can subscribe to him, I am at a loss to know, unless they have made up their minds to suffer the dazzling lustre of his name, to put out the sober light of their reason.

SILVANUS.

[To be continued.]

FOR THE AMERICAN FARMER.

MR. SKINNER,

Observing that Mr. "Pickering" had occasion to make some extracts from "Davy's" work, I take the liberty of handing you the whole of his table, and shall be glad if you will give it an insertion—it will set at rest various disputes on the subjects mentioned in it.

TABLE
Of the quantities of soluble or nutritive matters afforded by 1000 parts of different vegetable substances.

Vegetables, or vegetable substances.	Whole quantity of soluble or nutritive matter.	Starch or Sugar.	Saccharine matter or Sugar.	Gluten or Albumen.	Extract or matter rendered insoluble during evaporation.
Middlesex wheat average crop -	955	765	—	190	—
Spring wheat, -	940	700	—	240	—
Mildewed wheat of 1806, - -	210	178	—	32	—
Blighted wheat of 1804, - - -	650	520	—	130	—
Thick skinned Sicilian wheat of 1810 - - -	955	725	—	230	—
Thin skinned Sicilian wh't of 1810	961	722	—	239	—
Wheat from Pol'd, N. American wh't	950	750	—	200	—
Norfolk barley,	955	730	—	205	—
Oats from Scotland	920	790	70	60	—
Rye from Y. Shire,	743	641	15	87	—
Common bean, -	793	645	38	109	—
Dry Peas, -	570	426	—	103	41
Potatoes, -	574	501	22	35	16
Linseed cake, -	from 260 to 200	from 200 to 155	from 20 to 15	from 40 to 30	—
Red beet, -	151	123	11	17	—
White beet, -	148	14	121	13	—
Parsnip, - - -	136	13	119	4	—
Carrots, - - -	99	9	90	—	—
Common turnips,	98	3	95	—	—
Swedish do -	42	7	34	1	—
Cabbage, -	64	9	51	—	2
Broad leaved clover, -	73	41	24	—	—
Long rooted do.	39	31	3	2	3
White clover, -	39	30	4	3	2
Sainfoin, - - -	32	29	1	3	5
Lucern, - - -	39	28	2	3	6
Meadow fox tail grass, - - -	23	18	1	—	4
Perennial rye grass	33	24	3	—	6
Fertile meadow do.	39	26	4	—	5
Roughish do. do	78	65	6	—	7
Crested dogs' tail do. - - -	39	29	5	—	6
Spiked fescue do.	35	28	3	—	4
Sweet scented soft do.	19	15	2	—	2
Sweet scented vernal do.	82	72	4	—	6
Fiorin, - - -	50	43	4	—	3
Fiorin beet in Winter, - - -	54	46	5	1	2
	76	64	8	1	3

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 18, 1820.

BONES USED AS A MANURE.

It is a well known fact, that in England the means of accumulating manure, are husbanded with so much economy that even bones are saved; nay, have been imported from some parts of the continent as we are told in their newspapers for that purpose. In this country, especially in the neighbourhood of towns and villages, immense

numbers of bones are carefully thrown away. May we not suppose that the bone would yield more manure than the same weight of meat or dung? Every house-wife knows their richness in making soap.

Quere.—In what way can bones most effectually and advantageously be applied as a manure? An answer is requested—as also on their real value when so applied.

The shavings of horns from the shop of the comb-maker, are said to be more quick and valuable than any other manure for the garden!!

What can our obliging correspondents tell us about the natural history, and best method of destroying that dreadful plague of our orchards, the *aphid worm*—the information is required by some of our subscribers.

Occasional Extracts.

In No. 42, page 325, a Subscriber wants to know "the difference in bulk in a bushel of oyster shells before and after burning." Did I know I would cheerfully answer. If you please, I will be thankful if you will add to his inquiry "the difference in bulk and weight in a given quantity of lime stone before and after burning." Fire-wood is scarce in the vicinity of the nearest lime-kiln (6 miles) from my farm; lime 50 cents cash paid on its delivery at the kiln, eight cents should be added for carriage. Is not lime at 58 cents per bushel too expensive to be used as manure? Will some one of your readers, who has experience in burning lime, be so obliging as to express their opinion upon the following case stated, to wit: If the owner of the soil containing lime stone, would permit a farmer residing at the distance of six miles to quarry lime stone and to make no charge for the same, what could this farmer afford to sell the lime for on his farm after it was burnt? or in other words, if the lime stone and wood are six miles asunder, is it most feasible to carry the stone to the wood or wood to the stone? Would the value of the lime obtained at the expense above-mentioned, compensate the farmer for this labour?

In answering the inquiry relative to the cob-breaking machine, none of your correspondents have mentioned those vended by Wm. Brown, of Old Town, Baltimore. I have used one of his invention for several years in my mill, and they answer well both to break plaster and ears of corn.

For the American Farmer.

A very pernicious plant has taken almost entire possession of two of my best fields, and every attempt that I have made to eradicate it, has proven fruitless. This plant made its appearance some years ago, near to my garden fence, from which I conclude, that some bunches of it must have been thrown out of the garden, (as it is not uncommon for it to be cultivated as a garden flower.) It is known by various names, with us it is called the "Snow Drop," it has an onion root, the blossom white and generally flowers early in spring.

I have made several experiments on one of my fields, but without success; I have cultivated the

field in corn for two or three years successively; on one spot I put a large quantity of lime, which burnt up the whole surface of the ground, but on penetrating the earth two or three inches the next spring, I found the root fresh, and ready to shoot; I even took some of the roots and exposed them on a rock during all the winter frosts, and contrary to every reasonable calculation, the ensuing spring they did actually put forth. In travelling through Chester, Pennsylvania, I have frequently observed quantities of this plant lying in the public roads, from whence I conclude, that they must have been taken up by hand, as this is a tedious method, especially where it has got head. I take the liberty of putting my brother farmers on their guard against it, and to solicit from those who may have any knowledge of the best plan (besides paring and burying) of destroying this really pernicious plant. M.

What was said in the Farmer, by our correspondent "Sylvanus," respecting garlic, would equally apply to this plant.—*Edit. Farmer.*

VERY REMARKABLE SWINE.

In the market in this city, on Wednesday last, were exhibited two hogs, raised by Mr. John Harburger, of Lancaster county, Pennsylvania, of the following extraordinary size. The two weighed 1743 lbs.!! One of them was six feet and 3 inches in girth round the body. His length from the root of the tail to the end of the snout, was *nine feet and an inch*. The one was eighteen and the other fourteen months old. For the last six months, they had been fed entirely on corn and milk. They are in excellent plight, and yet increasing in weight.

Mr. Editor,

Since reading your remarks on "The Art of making good Bacon," I have inspected the memoranda of a practical economist for a series of years, and from a variety of experiments, have formed the following table of ten hogs, fattened chiefly on corn.

Days of fattening,	45
Weight, when put up,	1257
Do. when killed,	1728
Do. when cleaned,	1366
Weight of hams, shoulders, and middlings,	909
Do. of hams and shoulders,	752
Do. of leaf, fat,	138
Do. of feet, heads and backs,	319
Do. of hams, shoulders, and middlings, when smoked,	753
Do. of hams and shoulders, when do.	607

Hence it appears that the gain in fattening is nearly one pound per day.

relation to the entire hog the	loss in cleaning, 20	} per centum.
	hams, shoulders & middlings, 67	
	hams and shoulders, 55	
	leaf, fat, 10	
	loss in smoking, 20	

The doctrine of Silvanus in regard to the selection, the cutting up, curing, and smoking is esteemed as orthodox, and considering that the foregoing exhibit may enhance the stock of your valuable emporium, it is respectfully presented by a

STATISTICAL PHILOSOPHER.

Princess Anne, Md. Feb. 1st, 1820.

EDITORIAL ADVERTISEMENT.

As the first volume of the American Farmer, will close with the month of March, it is time to advertise our subscribers of some new regulations which experience has suggested as being necessary and beneficial, as well to the Editor as to his Patrons—to prevent misapprehension he will endeavour to make this notice as explicit as possible—and

FIRST.—The price of subscription will be as heretofore, \$4 per annum—but the subscriber must take the risk of the mails.

2ND.—To those who prefer it—the Editor will guarantee the receipt of a complete file—that is, when numbers fail to come to hand or are defaced in the mail—duplicate numbers will be sent until all are received in good condition—but the subscriber will wait two weeks before he gives notice to the Editor, as it will sometimes happen, that numbers may be delayed and yet not finally lost.

3RD.—The subscription for the whole year must be paid in advance.

In justification of this change we are sure the following reasons will satisfy every considerate reader—First, the remittance of the whole amount at once can make no material difference, to the disadvantage of the subscriber—on the contrary, it will be easier to make the sum and will save him the trouble of two remittances instead of one—again, it will enable the Editor to provide his materials on better terms, and having but one letter to answer—one receipt to transmit, and one entry to make, the whole operation will be simplified—much time saved and many mistakes avoided—and more leisure will be gained by him for the selection and preparation of the matter.

4TH.—Every one's subscription must commence with the commencement of a volume, because there will be an equal number of each paper printed throughout the year—and were subscriptions received for a shorter time than one year, a whole volume would be broken, and only a part of one be paid for.

For their punctuality so far, the editor returns his sincere thanks to his subscribers.

It is not for him to say whether they have had their penny'oth, but he can assuredly say that he has made the best of his means to make the American Farmer, worthy of the generous support it has received from the most enlightened men in all parts of the union.

As to the second volume from the materials on hand, and the promised support of eminent Agriculturists, the Editor can confidently promise that it shall be equal in variety and value to the first. More attention will in it be bestowed upon Turnpike roads

and canals—the Editor has been collecting documents for that purpose.

Once more the Editor respectfully requests his subscribers and friends, to procure him additional subscribers, to enable him to increase the number of engravings, some of which will be very costly.

POETRY.

Gypsum,

An Agricultural Ode.

1.

Ye favourites of the Nine, who plume your wing,
Where soft Etesian Zephyrs fan the air,
Where, over scenes for ever sweet and fair,
There reigns, from age to age, one still unfading spring.
How will you brook to hear a lay,
Breath'd amid northern blasts, and clouded skies,
Where loud the Genius of the tempest cries,
And fierce the wintry whirlwinds rise,
As boil contending tides in Fundy's rocky Bay.

2.

Well may the Muse approach, with fear,
A scene so rough—so cold—so drear;
But not Golconda's diamond mine,
Though there the brightest gems may shine,
Not all Panama's golden rills,
Not rich Potosi's silver hills,
Though all their treasures on the world they pour,
They equal not the mine on Fundy's ice-bound shore.

3.

Vain glitt'ring ores! at your commands,
Will nature deck the plain?
Can you give back to wasted lands
The teaming soil again?
In all their varied forms, confess,
Man cannot want, but food and dress;
And these, when made you can bestow:
But boasted dross! know, Gypsum's powers
Are, greater, higher far than yours.
'Tis Gypsum's favoured part to make these blessings grow!

4.

Oh! ye! who fly your natives hills,
To seek for distant plains, and streams,
And led by vain, though golden dreams,
Rush on the forest's untried ills;
Let the poor Indian roam his woods,
His light bark stem the western floods,
Uninjured on its way;
Whilst safe, you see your fields arise,
And bloom on Eden to your eyes,
By Gypsum's powerful sway,
Nor Alabama's sultry fens,
Nor wild Missouri's desert glens,
Shall lure thy sons, oh Maryland! from thy fields,
Whilst Fundy's rocky shore the precious Gypsum yields.

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